HERO · JR

PROGRAMMER'S GUIDE



HEATH ZENITH

Programmer's Guide

for the

HERO Jr. Robot

HEATH ZENITH

Model RTW-1
HEATH COMPANY
BENTON HARBOR, MICHIGAN 49022
597-3644

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INTRODUCTION

By now you have probably had many hours of enjoyment with your HERO Junior Robot. This Programmer's Guide will show you how to advance your skill level to have even more fun. You can learn secret passwords that will enable you to change the name of your Robot, change the "Master's" name (or the name that HERO Jr calls you), and much more. At this skill level, you will certainly be a "Robot Wizard."

WARNING

This equipment has been certified to comply with the limits for a Class B computing device, pursuant to Subpart J of Part 15 of FCC Rules.

NOTE: The I/O cable that connects between the Robot and host computer must be shielded in order for this equipment to meet Class B emission limits.

This equipment generates and uses radio frequency energy for its operation; and if not installed and used properly, that is, in strict accordance with the instruction manual, may cause interference to radio and television reception. It has been type tested and found to comply with the RF emission limits for reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which you can determine by turning the equipment off and on, try to correct the interference by one or more of the following measures:

- Move the equipment away from the receiver being interfered with.
- Relocate the equipment with respect to the receiver.
- Reorient the receiving antenna.

If you need additional help, consult your dealer or ask for assistance from the manufacturer. Customer service information is on the inside back cover of this Manual or on an insert sheet supplied with this equipment. You may also find the following booklet helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the US Government Printing Office, Washington, D.C. 20402, Stock No. 004-000-00345-4.

CHANGING THE ROBOT'S/MASTER'S NAMES

Your Robot is programmed to speak his own name or his master's name. This section of the manual instructs you on how to change either name or both names. The new names will remain in the Robot's memory until you turn the POWER switch off or change the names again.

- While you press down the ENTER key, press and release the 0 key. The Robot will say, "Robot Wizard".
- Press F 5 C 4 . The Robot will say, "Press ENTER to confirm or C to change."
- Press the ENTER key. The Robot will say, "Enter, Enter address."
- Press 0 3 B E to change the Robot's name, or
  0 3 C 0 to change the Master's name.
- The Robot will say, "Press ENTER to confirm or C to change."
- Press the ENTER key.
- The Robot will say, "Enter, enter bytes next."
- Press 0 5 .
- The Robot will say, "Next."
- Press D 6 to change the Robot's name, or
  F 7 to change the Master's name.
- The Robot will say, "Next."
- Press the RESET key. The Robot will say, "Ready."
- While you press down the ENTER key, press and release the 0 key. The Robot will say, "Robot Wizard."
- Press F 5 C 4 . The Robot will say, "Press ENTER to confirm or C to change."
- Press the ENTER key. The Robot will say, "Enter, enter address."
- Press 0 5 D 6 for the Robot's name, or
  0 5 F 7 for the Master's name.
- The Robot will say, "Press ENTER to confirm or C to change."
- Press the ENTER key.
- The Robot will say, "Enter, enter bytes next."
- Enter the hex codes for the new name, followed by 3 E and F F.

  EXAMPLE:

  Let's say you want to call your Robot "Walter." First, look up Walter in the Name Directory and write down the data:

  Walter 2D 3D 18 2A 3A

  When you enter a name, you must follow it's data by:

  3E FF

  Therefore, the total data for the name Walter is:

  2D 3D 18 2A 3A 3E FF
- After the last entry, press the RESET key.
- Check the name. Press the SPEAK key and enter:

  0 4 for the Robot's name, or
  1 8 for the Master's name.

SENSOR WIZARDRY

The following instructions allow you to adjust the sensitivity of the light sensor and the sound sensor. (See Pictorial 1, Page 7, and lift the Robot's head just far enough to make the adjustments. Do not disconnect any wires or cables.)

The instructions also provide you with the necessary information to activate the Robot's internal distance-measuring routine. With this, you can make your Robot measure distances whenever you wish.

LIGHT SENSOR ADJUSTMENT

- While you hold down the Robot's ENTER key, press and release the 0 key. The Robot will say, "Robot Wizard."

- Enter F 9 5 2 on the Robot's keypad and press the ENTER key. Then refer to Pictorial 1 and adjust the light sensor control. From the rear of the Robot, turn it counterclockwise to make the sensor more sensitive or clockwise to make it less sensitive.

  As you adjust the LIGHT LEVEL control, place a finger against the light sensor to block out most of the light. The LEDs on top of the Robot will flash (counting in hex). As more LEDs light, the Robot's light sensor will become more sensitive and respond to dimmer and dimmer light.

- When you have the control set to a position that you want to try, push the Robot's RESET key.

SOUND SENSOR ADJUSTMENT

- While you hold down the Robot's ENTER key, press and release the 0 key. The Robot will say, "Robot Wizard."

- Enter F 9 5 D on the Robot's keypad and press the ENTER key. Then refer to Pictorial 1 and adjust the sound sensor control. From the rear of the Robot, turn it counterclockwise to make the sensor more sensitive or clockwise to make it less sensitive.

  As you adjust the control, make a constant monotone sound. The LED's on top of the Robot will flash (counting in hex). As more LEDs light, the Robot's sound sensor will become more sensitive and respond to quieter and quieter sounds. Do not set the control so that all the LED's are on; set it so that about half of them are on (or just ordinary room noises will make it respond).

- Press the RESET key.

MEASURING DISTANCE

- While you hold down the Robot's ENTER key, press and release the 0 key. The Robot will say, "Robot Wizard."

- Enter F 5 7 B and press the ENTER key. The Robot will now measure the distance to the nearest object set in front of it, and then tell you what this distance is.

- Push the RESET key to stop measuring.

OTHER WIZARD PASSWORDS

CHANGING THE TIME AND DATE

- While you hold down the ENTER key, press and release the 0 key. The Robot will say, "Robot Wizard."
- Press C F B 3 . The Robot will say, "Press ENTER to confirm or C to change."
- Press the ENTER key.
- Your Robot will prompt you as it did on power-up and will permit you to change the present time and date.

CHANGING THE "SPECIAL DAY"

- While you hold down the ENTER key, press and release the 0 key. The Robot will say, "Robot Wizard."
- Enter 8 4 C 4 . The Robot will say, "Press ENTER to confirm or C to change."
- Press the ENTER key.
- Your Robot will prompt you as it did on power-up and will permit you to change the "Special Day". NOTE: If you press the ENTER key (don't care) in response to the month, day and year, every day will be a special day. If you enter a month, but then a (don't care) for the day and year, then every day of that month will be a special day.

ERASE ALL PLANS

NOTE: This bit of wizardry is useful if you forget what plans you have entered or wish to change a plan that you already entered. It erases ALL plans. Then you can re-enter only the plans that you wish to remain.

- While you hold down the ENTER key, press and release the 0 key. The Robot will say, "Robot Wizard."
- Enter F 6 A 5 . The Robot will say, "Press ENTER to confirm or C to change."
- Press the ENTER key. The Robot will say, "Deleting Plans ... Ready." By this time, all plans will have been erased.

RS-232 ACCESSORY OPERATION

The RS-232 Accessory is a serial interface that allows you to transfer files from a computer to the Robot or from the Robot to a computer. Terminal emulation software (such as CPS) is recommended for moving the data back and forth. The files must be in Motorola's MIKBUG format, or you can write your own handler if you want to use other formats.

Assemblers that will operate on Heath/Zenith Computers are available from the Heath User's Group (HUG) or from Motorola. Heath User's Group assemblers are:

COMPUTER	OPERATING SYSTEM	PART #
H8	H-DOS	885-1123
H/Z-89	H-DOS	885-1123
H/Z-89	CP/M (hard sectored)	885-1229
H/Z-89	CP/M (soft sectored)	885-1229-37
H/Z-100 PC	CP/M-85	885-1229-37

The serial I/O cables for RS-232 use that are available from Heath Company are listed below. NOTE: The RS-232 connector on your Robot's RS-232 Accessory is considered to be a female connector.

HCA-11 Has a male connector on one end and a female connector on the other end (for terminals and computers that have a male connector).

HCA-10 Has a male connector on each end (for terminals and computers that have a female connector).

Plug a serial I/O cable, with appropriate connectors, between your Robot's RS-232 connector and computer.

LOADING A PROGRAM INTO THE ROBOT

To load a file, first set the baud rate jumper (as explained below under "Baud Rate Selection").

- Load the terminal emulation software (example: CPS) into your computer.
- Press the Robot's RESET key. The Robot will say, "Ready."
- While you hold down the Robot's ENTER key, press and release the 0 key; the Robot will say, "Robot Wizard." Then press the Robot's F B F 8 ENTER keys.

  The following prompt will appear on the screen:

  d>

- Type L RETURN. The Robot is now ready to accept the file from the computer.
- Transfer the file to the Robot using the commands for your particular emulation software. (Example: Type F1 B FILENAME.EXT for our CPS example.)
- After the file is loaded, there will again be the d> prompt.

DUMPING A FILE FROM THE ROBOT

- Press the Robot's RESET key. The Robot will say, "Ready."
- While you hold down the Robot's ENTER key, press and release the 0 key; the Robot will say, "Robot Wizard." Then press the Robot's F B F 8 ENTER keys.
- Load the terminal emulation software into your computer (Example: CPS).

  The following prompt will appear on the screen:

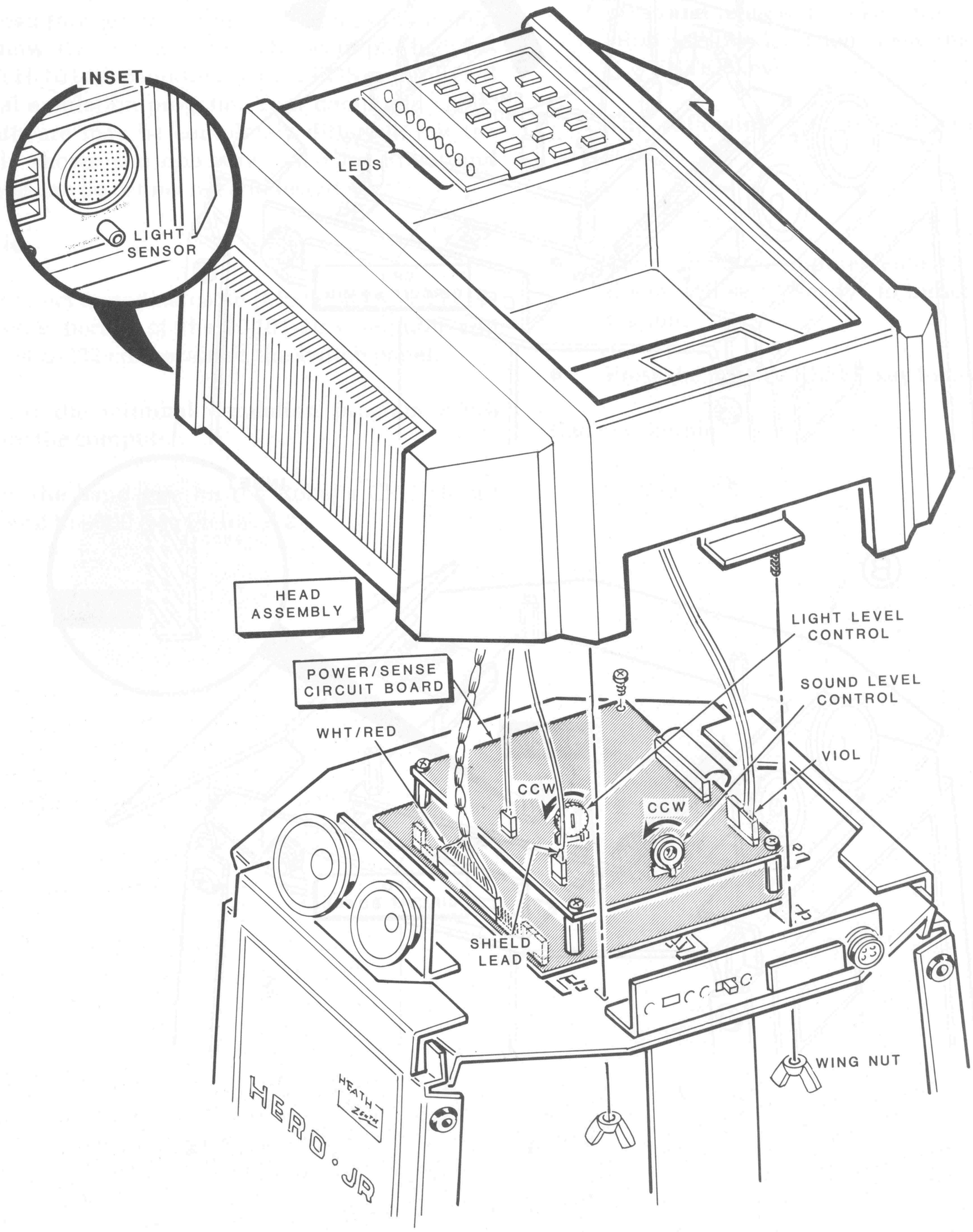
  d>

- On your terminal, enter D (then the start address, consisting of four hex digits, comma, and the stop address of four hex digits). For example: D 8000, 8100.
- Transfer the file using your emulation software. (In our CPS example, enter: F2 B FILENAME.EXT RETURN RETURN)

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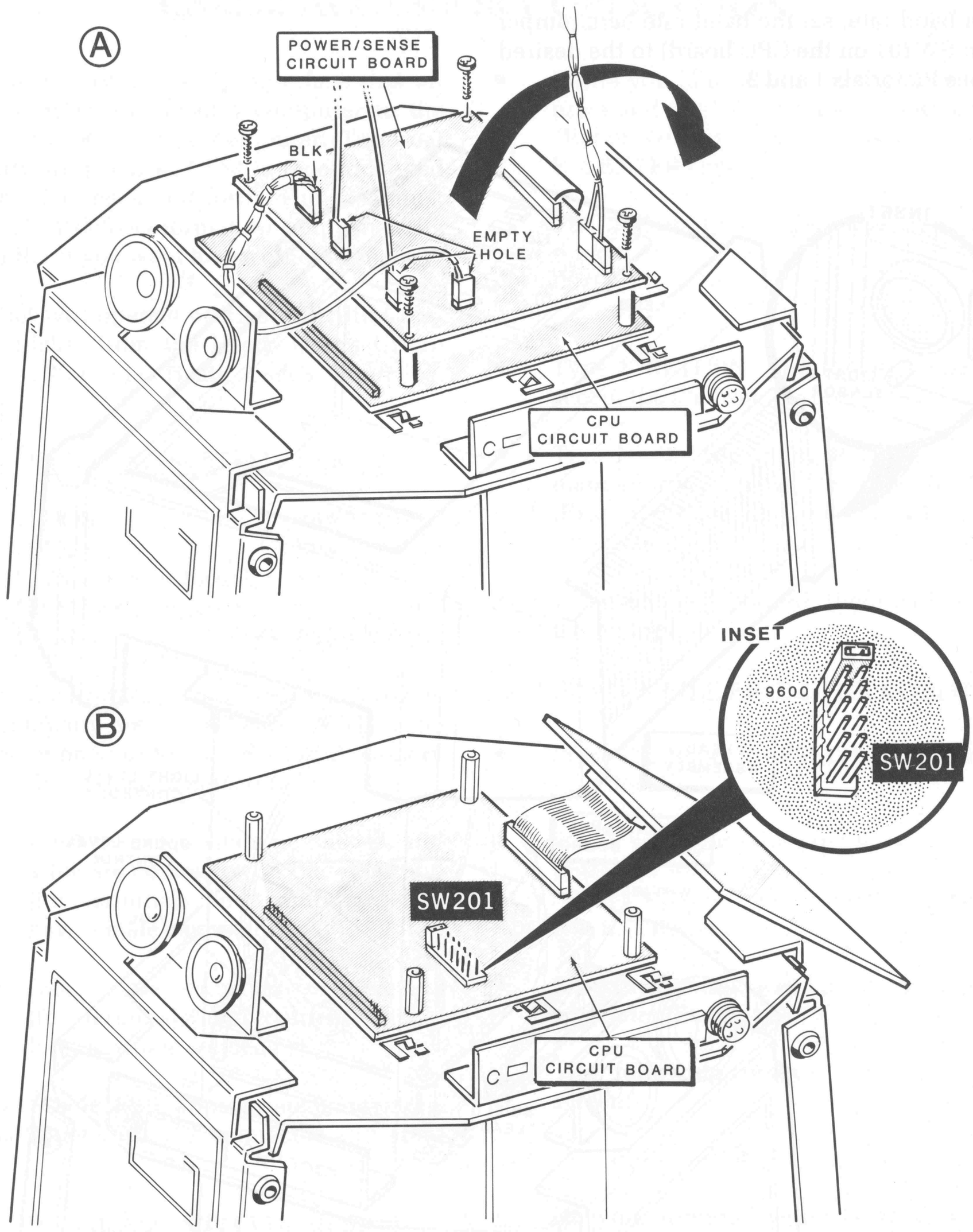
BAUD RATE SELECTION

To select a baud rate, set the baud rate berg jumper (located on SW201 on the CPU board) to the desired location. See Pictorials 1 and 2.



PICTORIAL 1

Removing head & adjusting controls.



PICTORIAL 2

Removing power/sense board & setting jumper.

RS-232 OPERATIONAL TEST

You should perform an operational test similar to the following one to verify that your Robot and computer are working together.

First, read through the "RS-232 Operation" section. Then read through the following example to understand how the test is done. The example features a Heath H-101-20 computer with Z-DOS and the CPS terminal emulation program. Your computer, cable, and software may be completely different, but the example shows you one way that your Robot and computer can be connected and tested.

Example:

- Connect a modem cable (Model # HCA-11) between port B of the H-101-20 Computer and the RS-232 connector on the switch panel.
- Load the terminal emulation program (CPS) into the computer.
- Set the baud rate on the Robot's CPU circuit board to 9600 (see Pictorial 2).
- Turn on the Robot or wake him up placing the SLEEP/NORM switch in the NORM position.
- Press the Robot's RESET key. The Robot will say, "Ready."
- While you hold down the Robot's ENTER key, press and release the 0 key; the Robot will say, "Robot Wizard." Then press the Robot's F B F 8 ENTER keys.

  The following prompt will appear on the screen:

  d>

- Then, on your computer, enter G RETURN. The Robot will say, "Ready" to indicate proper operation.
- Press the Robot's RESET key to reset the Robot.

End of example.

NAME DIRECTORY

MALE NAMES

NAME	HEX CODE
AARON	2F 00 3A 32 0D
ABNER	2F 00 02 00 0E 0D 3A
ADAM	2F 00 1E 2F 00 0C
ADOLPH	2F 00 1E 35 34 18 1D
ADRIAN	06 09 29 1E 2B 21 23 0D
ALBERT	2F 00 18 0E 3A 2A
ALEXANDER	32 18 02 00 1C 03 12 2F 00 0D 1E 3A
ALFRED	2F 00 18 1D 2B 02 00 1E
ALLEN	2F 00 18 18 0B 09 0D
ALVIN	2F 00 18 0F 0B 09 0D
AMOS	06 09 29 0C 32 31 1F
ANDREW	2F 00 0D 1E 1E 2B 36 37 37
ANTHONY	2F 00 0D 39 35 37 0D 29
ARCHIBALD	15 2B 2A 10 32 0E 34 34 18 18 1E
ARNOLD	15 2B 0D 34 34 18 18 1E
ARTHUR	15 2B 39 3A 2B
ASHLEY	32 11 18 21 29
AUSTIN	3D 1F 2A 0B 09 0D
AVERY	06 09 29 0F 3A 29
BARNEY	0E 15 2B 0D 21 29
BARRY	0E 01 00 2B 29
BARTON	0E 15 2B 2A 32 0D
BENEDICT	0E 02 00 0D 0B 09 1E 0B 09 19 2A
BENJAMIN	0E 02 00 0D 1E 1A 2F 00 0C 0B 0D
BERNARD	0E 3A 2B 0D 3A 1E
BLAINE	0E 18 06 21 29 0D
BLAIR	0E 18 01 01 2B
BLAKE	0E 18 06 21 29 19
BRADFORD	0E 2B 2F 00 1E 1D 34 34 2B 1E
BRADLEY	0E 2B 2F 00 1E 18 21 29
BRETT	0E 2B 02 00 2A
BRIAN	0E 2B 15 00 29 23 0D
BROOKS	0E 2B 16 16 19 1F
BRUCE	0E 2B 36 37 37 IF
BRYAN	0E 2B 15 00 09 29 2F 00 0D
BURTON	0E 3A 2B 2A 32 0D
BYRON	0E 15 00 29 2B 32 0D
CALVIN	19 2F 00 18 0F 0B 09 0D
CARL	19 15 2B 18
CECIL	3C 29 1F 0B 18
CHARLES	2A 10 15 2B 18 12
CHESTER	2A 10 02 00 1F 2A 3A
CHRISTOPHER	19 2B 0B 09 12 2A 2F 00 1D 3A
CLAIR	19 18 00 00 3A
CLARENCE	19 18 00 00 3A 02 00 0D 1F
CLARK	19 18 15 2B 19
CLAUDE	19 18 3D 1E
CLAYTON	19 18 06 09 29 2A 32 0D
CLEMENT	19 18 02 00 0C 02 00 0D 2A
CLIFFORD	19 18 0B 09 1D 34 34 2B 1E
CLINTON	19 18 0B 09 0D 2A 32 0D
CLYDE	19 18 15 00 29 1E
CONRAD	19 32 0D 2B 2F 00 1E

NAME	HEX CODE
COURTNEY	19 3A 2B 2A 0D 21 29
CRAIG	19 2B 06 21 29 1C
CURTIS	19 3A 2B 2A 0B 09 1F
CYRUS	1F 15 00 29 2B 32 1F
DALE	1E 06 21 29 18
DANIEL	1E 2F 00 0D 21 29 18
DARRYL	1E 15 23 2B 2B 0B 09 18
DAVID	1E 06 21 29 0F 0B 09 1E
DEAN	1E 3C 21 0D
DENNIS	1E 02 00 0D 0D 0B 09 12
DEXTER	1E 02 00 19 03 1F 2A 3A
DOMINIC	1E 32 0C 0B 0D 0B 19
DONALD	1E 15 23 0D 3D 18 1E
DOUGLAS	1E 23 32 1C 18 23 23 12
DREW	1E 2B 36 37 37
DUDLEY	1E 32 31 1E 18 21 29
DUNCAN	1E 32 31 0D 19 2F 00 0D
DWIGHT	1E 2D 23 08 29 2A
EARL	3A 2B 18
EDGAR	02 00 1E 1C 3A
EDMUND	02 00 1E 0C 32 31 0D 1E
EDWARD	02 00 1E 2D 3A 1E
EDWIN	02 00 1E 2D 0B 09 0D
ELLIOTT	02 00 18 29 23 2A
ELMER	02 00 18 0C 3A
EMERSON	02 0C 3A 1F 32 0D
EMERY	02 0C 3A 29
EMMANUEL	02 0C 2F 00 0D 22 37 23 18
ERIC	02 2B 09 19
ERNEST	3A 0D 02 00 1F 2A
ERWIN	3A 2D 0B 09 0D
EUGENE	22 36 37 1E 1A 21 29 0D
EVERETT	02 0F 3A 02 00 2A
FELIX	1D 3C 29 18 0B 19 03 1F
FERDINAND	1D 3A 1E 0B 09 0D 00 0D 1E
FLOYD	1D 18 35 23 09 21 1E
FRANKLIN	1D 2B 2F 00 14 19 18 0B 09 0D
FREDERICK	1D 2B 02 00 1E 02 2B 09 19
GABRIEL	1C 06 21 29 0E 0E 2B 3C 29 2F 00 18
GARY	1C 01 00 2B 29
GEORGE	1E 1A 29 34 34 2B 1E 1A
GERALD	1E 1A 02 00 2B 23 18 1E
GILBERT	1C 0B 09 18 0E 3A 2A
GLENN	1C 18 02 00 0D
GODFREY	1C 15 23 1E 1D 2B 21 29
GORDON	1C 34 34 2B 1E 32 0D
GRAHAM	1C 2B 2F 00 0C
GRANT	1C 2B 2F 00 0D 2A
GREGORY	1C 2B 02 00 1C 34 34 2B 29
GRIFFITH	1C 2B 0B 09 1D 0B 09 39
GROVER	1C 2B 35 37 0F 3A

NAME	HEX CODE
GUY	1C 15 00 29
HAMILTON	1B 2F 00 0C 0B 18 2A 23 32 0D
HANS	1B 2F 00 0D 12
HAROLD	1B 00 00 3A 34 34 18 18 1E
HARRISON	1B 01 00 2B 0B 09 12 32 0D
HARRY	1B 01 00 2B 29
HARVEY	1B 15 23 2B 0F 21 29
HARWOOD	1B 15 2B 2D 16 16 1E
HECTOR	1B 02 00 19 2A 3A
HENRY	1B 02 00 0D 2B 29
HERBERT	1B 3A 0E 3A 2A
HERMAN	1B 3A 0C 01 0D
HIRAM	1B 15 00 29 2B 2F 00 0C
HOMER	1B 35 37 0C 3A
HORACE	1B 34 34 2B 00 1F
HOWARD	1B 15 34 37 3A 1E
HUBERT	1B 22 36 37 37 0E 3A 2A
HUGH	1B 22 36 37
HUGO	1B 22 36 37 37 1C 35 37
HUMPHREY	1B 32 31 0C 1D 2B 21 29
IAN	15 00 09 29 2F 00 0D
IRA	15 00 09 29 2B 15 23
IRVIN	3A 0F 0B 09 0D
IRVING	3A 0F 0B 09 14
IRWIN	3A 2D 0B 09 0D
ISAAC	15 00 09 29 12 2F 00 19
ISIDORE	0B 09 12 15 23 1E 34 34 2B
IVAN	15 00 09 29 0F 2F 00 0D
JACOB	1E 1A 06 09 29 19 15 23 0E
JAMES	1E 1A 06 21 29 0C 12
JASON	1E 1A 06 09 29 12 23 32 0D
JASPER	1E 1A 2F 00 1F 25 3A
JAY	1E 1A 06 09 29
JEFFREY	1E 1A 02 00 1D 2B 21 29
JEROME	1E 1A 3A 2B 35 37 0C
JESSE	1E 1A 02 00 1F 29
JOEL	1E 1A 35 37 18
JOHN	1E 1A 15 23 0D
JOHNATHAN	1E 1A 15 23 0D 2F 00 39 2F 00 0D
JOSEPH	1E 1A 35 37 12 02 00 1D
JULES	1E 1A 36 37 37 18 12
JULIAN	1E 1A 36 37 37 18 21 23 0D
JULIUS	1E 1A 36 37 37 18 0B 09 32 1F
JUSTIN	1E 1A 32 31 1F 2A 0B 09 0D
KARL	19 15 2B 18
KEITH	19 3C 29 39
KELLY	19 02 00 18 29
KELVIN	19 02 00 18 0F 0B 09 0D
KENNETH	19 02 00 0D 02 00 39
KENT	19 02 00 0D 2A
KERRY	19 01 00 2B 29
KEVIN	19 02 00 0F 0B 0D
KIRK	19 3A 2B 19
LANCE	18 2F 00 0D 1F
LAWRENCE	18 3D 2B 02 00 0D
LEE	18 3C 29
LELAND	18 3C 29 18 00 0D 1E
LEO	18 29 35 37

NAME	HEX CODE
LEON	18 29 32 0D
LEONARD	18 02 00 0D 15 2B 1E
LEOPOLD	18 29 32 25 34 34 18 18 1E
LEROY	18 21 0A 2B 35 23 09 21
LESLIE	18 02 00 1F 18 29
LESTER	18 02 00 1F 2A 3A
LEWIS	18 36 37 37 0B 1F
LLOYD	18 35 23 09 21 1E
LOUIS	18 36 36 2D 0A 1F
LOWELL	18 35 37 02 00 18
LUKE	18 36 37 37 19
LUTHER	18 36 37 37 38 3A
LYLE	18 15 00 29 18
LYNN	18 0B 09 0D
MALCOLM	0C 2F 23 18 19 32 23 0C
MANUEL	0C 2F 00 0D 22 36 37 37 02 00 1B
MARION	0C 01 00 2B 29 31 31 0D
MARK	0C 15 2B 19
MARTIN	0C 15 2B 2A 0B 09 0D
MARVIN	0C 15 2B 0F 0B 09 0D
MATTHEW	0C 2F 00 39 22 36 37 37
MAURICE	0C 3D 2B 3C 29 1F
MAXWELL	0C 2F 00 19 03 1F 2D 02 00 18
MELVIN	0C 02 00 18 0F 0B 09 0D
MICHAEL	0C 15 00 09 29 19 32 31 18
MILES	0C 15 00 09 23 18 12
MILTON	0C 0B 09 18 2A 32 0D
MITCHELL	0C 0B 09 2A 10 02 00 18
MORGAN	0C 34 34 2B 1C 2F 00 0D
MORRIS	0C 34 34 2B 0B 09 12
MORTIMER	0C 34 34 2B 2A 0B 0C 3A
MURRAY	0C 3A 2B 2B 3C 29
MYRON	0C 15 00 29 2B 32 0D
NAPOLEON	0D 15 08 25 35 37 18 02 00 32 0D
NATHAN	0D 06 21 29 39 2F 00 0D
NATHANIEL	0D 2F 00 39 2F 00 0D 21 29 18
NEIL	0D 3C 29 18
NICHOLAS	0D 0B 09 19 19 35 37 18 32 31 1F
NIGEL	0D 15 00 09 29 1E 1A 02 00 18
NOAH	0D 35 37 15 23
NOEL	0D 35 37 18
NORBERT	0D 34 34 2B 0E 3A 2A
NORMAN	0D 34 34 2B 0C 01 0D
OLIVER	3D 18 0B 0F 3A
OSCAR	15 23 1F 19 3A
OSWALD	15 23 1F 2D 23 18 1E
OTTO	15 23 2A 35 37
OWEN	35 37 0A 0D
PATRICK	25 2F 00 2A 2B 0B 09 19
PAUL	25 3D 18
PETER	25 3C 29 2A 3A
PHILLIP	1D 0B 09 18 0B 09 25
QUINTIN	19 2D 0B 09 0D 2A 32 0D
RALPH	2B 15 23 18 1D
RANDALL	2B 2F 00 0D 1E 3D 18
RANDOPLH	2B 2F 00 0D 1E 35 34 18 1D
RAYMOND	2B 06 09 29 0C 23 0D 1E
REGAN	2B 06 09 29 1C 2F 00 0D

NAME	HEX CODE
REX	2B 02 00 19 03 1F
REYNOLD	2B 02 00 0D 0D 34 34 18 18 1E
RICHARD	2B 0B 09 2A 10 3A 1E
ROBERT	2B 15 23 0E 3A 2A
ROBIE	2B 3D 0E 3C 29
ROBIN	2B 15 23 0E 0B 0D
R2D2	15 31 3A 2A 36 37 37 1E 3C 21 29 2A 36 37 37
RODNEY	2B 15 23 1E 0D 21 29
ROGER	2B 15 23 1E 1A 3A
ROLAND	2B 15 23 18 00 0D 1E
RONALD	2B 23 32 0D 23 18 1E
ROSS	2B 3D 1F
ROWLAND	2B 35 23 18 2F 00 0D 1E
ROY	2B 35 23 09 21
RUDOLPH	2B 36 37 1E 35 34 18 1D
RUSSELL	2B 32 31 1F 02 00 18
SAMUEL	1F 2F 00 0C 22 36 37 37 23 18
SAUL	1F 3D 18
SCOTT	1F 19 15 23 2A
SEBASTIAN	1F 02 00 0E 2F 00 1F 2A 10 23 0D
SHAWN	11 3D 0D
SHELBY	11 02 00 18 0E 29
SHELDON	11 02 00 18 1E 32 0D
SIDNEY	1F 0B 09 1E 0D 21 29
SIEGFRIED	1F 21 29 1C 1D 2B 29 1E
SILVESTER	1F 0B 09 18 0F 02 00 1F 2A 3A
SIMON	1F 15 00 09 29 0C 15 23 0D
SOLOMON	1F 15 23 18 31 0C 32 0D
SPENCER	1F 25 02 00 0D 1F 3A
STACEY	1F 2A 06 09 29 1F 3C 29
STANLEY	1F 2A 2F 00 0D 18 21 29
STEVEN	1F 2A 3C 29 0F 2F 00 0D
STEWART	1F 2A 36 37 37 15 2B 2A
SYLVESTER	1F 0B 18 0F 02 00 1F 2A 3A
TAYLOR	2A 06 21 29 18 3A
TERRY	2A 02 00 2B 29
THEODORE	39 29 15 23 1E 34 34 2B
THOMAS	2A 15 23 0C 23 23 12

NAME	HEX CODE
3CPO	39 2B 3C 29 1F 3C 21 29 25 3C 21 29 35 37
THURSTON	39 3A 2B 1F 2A 32 0D
TIMOTHY	2A 0B 09 0C 2F 00 39 29
TODD	2A 15 23 1E
TRACY	2A 2B 06 21 29 1F 29
TRAVIS	2A 2B 2F 00 0F 0B 1F
TRENT	2A 2B 02 00 0D 2A
TROY	2A 2B 35 23 09 21
TURNER	2A 3A 2B 0D 3A
TYLER	2A 15 00 29 18 3A
TYRONE	2A 15 00 09 29 2B 35 37 0D
VAN	0F 2F 00 0D
VAUGHN	0F 3D 0D
VICTOR	0F 0B 09 19 2A 3A
VINCENT	0F 0B 09 0D 1F 02 00 0D 2A
VIRGIL	0F 3A 2B 1E 1A 0B 09 18
VIVIAN	0F 0B 09 0F 21 23 0D
WADE	2D 06 21 29 1E
WALDO	2D 3D 18 1E 35 37
WALLACE	2D 3D 18 18 32 31 1F
WALTER	2D 3D 18 2A 3A
WARD	2D 35 34 2B 1E
WARNER	2D 35 34 2B 0D 3A
WARREN	2D 35 34 2B 0A 0D
WAYNE	2D 06 21 29 0D
WEBSTER	2D 02 00 0E 1F 2A 3A
WENDELL	2D 02 00 0D 1E 00 18
WESLEY	2D 02 00 1F 18 21 29
WHITNEY	2D 0B 09 2A 0D 21 29
WILBUR	2D 0B 09 18 0E 3A 2B
WILFRED	2D 0B 09 18 1D 2B 09 1E
WILLARD	2D 0B 09 18 3A 1E
WILLIAM	2D 0B 09 18 22 2F 00 0C
WILLIS	2D 0B 09 18 0B 09 12
WINSTON	2D 0B 09 0D 1F 2A 32 0D
WOODROW	2D 16 16 1E 2B 35 37

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FEMALE NAMES

NAME	HEX CODE
ABBY	2F 00 0E 29
ABIGAIL	2F 00 0E 32 1C 06 21 29 18
ADALINE	2F 00 1E 31 23 18 15 00 29 0D
ADRIENNE	06 21 29 1E 2B 0B 09 02 00 0D
AGNES	2F 00 1C 0D 02 00 1F
ALICE	2F 00 18 32 31 1F
ALISON	2F 00 18 18 0B 09 12 32 0D
AMANDA	32 0C 2F 00 0D 1E 31 23
AMBER	2F 00 0C 0E 3A
AMELIA	2F 00 0C 3C 29 18 21 32
AMY	06 21 29 0C 29
ANDREA	2F 00 0D 1E 2B 21 29 31
ANGELA	2F 00 0D 1E 1A 02 00 18 31 23
ANGELINE	2F 00 0D 1E 1A 02 00 18 18 15 00 29 0D
ANITA	2F 00 0D 3C 29 2A 31 23
ANN	2F 00 0D
ANNA	2F 00 0D 0D 15 08
ANNABEL	2F 00 0D 0D 15 08 0E 02 00 18
ANNETTE	2F 00 0D 0D 02 00 2A
BARBARA	0E 15 23 2B 0E 15 23 2B 15 23
BEATRICE	0E 3C 29 2F 00 2A 2B 0B 1F
BETH	0E 02 00 39
BETTY	0E 02 00 2A 2A 3C 29
BEVERLY	0E 02 00 0F 3A 18 29
BLAIR	0E 18 01 01 2B
BLANCHE	0E 18 2F 00 0D 2A 10
BONNIE	0E 15 23 0D 29
BRENDA	0E 2B 02 00 0D 1E 31 23
BRIDGET	0E 2B 0B 09 1E 1A 02 00 2A
CAROL	19 00 00 3A 35 34 18
CAROLINE	19 00 00 3A 35 34 18 18 15 00 29 0D
CATHERINE	19 2F 00 39 3A 0B 09 0D
CHARLOTTE	2A 10 15 2B 18 15 23 2A
CHERYL	11 00 00 3A 32 31 18
CHRISTINE	19 2B 0B 09 1F 2A 2A 3C 29 0D
CLAIRE	19 18 01 01 2B
CLARA	19 18 00 00 3A 31 23
CLARISSA	19 18 00 00 3A 0B 1F 31 23
CLAUDETTE	19 18 3D 1E 02 00 2A
CLAUDIA	19 18 3D 1E 21 32
COLLEEN	19 15 23 18 3C 29 0D
CONNIE	19 15 23 0D 3C 29
CYNTHIA	1F 0B 09 0D 39 0B 09 31 23
DAISY	1E 06 21 29 12 29
DALE	1E 06 21 29 18
DAWN	1E 3D 0D
DEBRA	1E 02 00 0E 2B 15 08
DENISE	1E 02 00 0D 3C 29 12
DIANA	1E 15 00 29 2F 00 0D 0D 15 08
DIANE	1E 15 00 29 2F 00 0D
DINAH	1E 15 00 29 0D 15 23
DOLORES	1E 2F 00 18 34 34 2B 02 00 12
DONNA	1E 15 23 0D 31 23
DORA	1E 34 34 2B 31 23
DORIS	1E 34 34 2B 0B 1F
DOROTHY	1E 34 34 2B 35 37 39 3C 29

NAME	HEX CODE
EDITH	3C 29 1E 0B 09 39
EDNA	02 00 1E 0D 31 23
EILEEN	15 00 09 29 18 3C 29 0D
ELAINE	29 18 06 21 29 0D
ELEANOR	02 00 18 0A 0D 34 34 2B
ELIZABETH	02 18 0B 09 12 32 0E 02 00 39
ELLEN	02 00 18 0A 0D
EMILY	02 0C 0B 18 29
EMMA	02 00 0C 31 23
ESTHER	02 00 1F 39 3A
ETHEL	02 00 39 23 18
EVE	3C 29 0F
EVELYN	02 00 0F 32 18 0B 09 0D
FAITH	1D 06 21 29 39
FAWN	1D 3D 0D
FAY	1D 06 09 29
FELICIA	1D 02 00 18 3C 29 1F 3C 29 15 23
FLORA	1D 18 34 34 2B 31 23
FLORENCE	1D 18 34 34 2B 02 00 0D 1F
FRANCES	1D 2B 2F 00 0D 1F 0B 09 1F
FREDERICA	1D 2B 02 00 1E 3A 3C 29 19 15 08
GAIL	1C 06 21 29 18
GEORGIA	1E 1A 34 34 2B 1E 1A 15 23
GERTRUDE	1C 3A 2B 2A 2B 36 37 37 1E
GLADYS	1C 18 2F 00 1E 0B 1F
GLORIA	1C 18 34 34 2B 21 32
GRACE	1C 2B 06 21 29 1F
GWENDOLYN	1C 2D 02 00 0D 1E 35 34 18 0B 0D
HARRIET	1B 00 00 3A 2B 3C 29 0B 09 2A
HAZEL	1B 06 21 29 12 32 31 18
HEATHER	1B 02 00 38 3A
HELEN	1B 02 00 18 0A 0D
HOLLY	1B 15 23 18 29
HOPE	1B 35 37 25
IDA	15 00 09 29 1E 15 08
IRENE	15 00 21 2B 21 29 0D
IRIS	15 00 09 29 2B 0B 09 12
IRMA	3A 2B 0C 31 23
ISABEL	0B 09 12 2F 00 0E 02 00 18
JACQUELINE	1E 1A 2F 00 19 15 23 18 02 00 0D
JAMIE	1E 1A 06 21 29 0C 3C 29
JANE	1E 1A 06 21 29 0D
JANET	1E 1A 2F 00 0D 00 2A
JANICE	1E 1A 2F 00 0D 0B 1F
JEAN	1E 1A 3C 21 0D
JENNIFER	1E 1A 02 00 0D 0B 1D 3A
JESSICA	1E 1A 02 00 1F 0B 09 19 31 23
JESSIE	1E 1A 02 00 1F 29
JILL	1E 1A 0B 09 18
JOAN	1E 1A 35 37 0D
JOY	1E 1A 35 23 09 21
JOYCE	1E 1A 35 23 09 21 1F
JUDITH	1E 1A 36 37 37 1E 0B 39
JULIA	1E 1A 36 37 37 18 21 32
JULIE	1E 1A 36 37 37 18 29
JUNE	1E 1A 36 37 37 0D
KAREN	19 00 00 3A 0A 0D

NAME	HEX CODE
KATHERINE	19 2F 00 38 3A 0B 0D
KATHLEEN	19 2F 00 39 18 3C 29 0D
KIM	19 0B 09 0C
LAURA	18 3D 2B 31 23
LAURIE	18 3D 2B 29
LAVERNE	18 15 08 0F 3A 0D
LEIGH	18 3C 29
LEONA	18 3C 29 35 37 0D 15 08
LESLIE	18 02 00 1F 18 29
LILA	18 3C 29 18 15 08
LILLIAN	18 0B 09 18 21 23 0D
LILLY	18 0B 09 18 29
LINDA	18 0B 09 0D 1E 15 08
LISA	18 3C 29 12 15 08
LOIS	18 35 37 0B 1F
LOLA	18 35 37 18 15 08
LORETTA	18 35 37 2B 02 00 2A 31 23
LORRAINE	18 34 34 2B 06 21 29 0D
LOUISE	18 36 37 37 3C 29 12
LUCILLE	18 36 37 37 1F 0B 18
LUCY	18 36 37 37 1F 29
LUELLA	18 36 37 37 02 00 18 31 23
LYNNE	18 0B 09 0D
MABEL	0C 06 21 29 0E 18
MADELINE	0C 2F 00 1E 1E 02 00 18 18 15 00 29 0D
MARCIA	0C 15 2B 11 31 23
MARGARET	0C 15 2B 1C 00 00 3A 00 2A
MARIA	0C 15 23 2B 3C 29 15 23
MARIAN	0C 00 00 3A 21 23 0D
MARIE	0C 15 23 2B 3C 29
MARILYN	0C 00 00 3A 0B 18 29 0D
MARLENE	0C 15 2B 18 21 29 0D
MARSHA	0C 15 2B 11 31 23
MARTHA	0C 15 2B 39 31 23
MARY	0C 00 00 3A 29
MATILDA	0C 2F 00 2A 0B 18 1E 31 23
MAUREEN	0C 3D 2B 3C 29 0D
MAXINE	0C 2F 00 19 03 1F 3C 29 0D
MAY	0C 06 09 29
MELANIE	0C 02 00 18 2F 00 0D 0D 3C 29
MELINDA	0C 02 00 18 18 0B 09 0D 1E 15 23
MELISSA	0C 02 00 18 0B 1F 31 23
MELODY	0C 02 00 18 35 37 1E 3C 29
MICHELE	0C 0B 09 2A 10 02 00 18
MILDRED	0C 0B 09 18 1E 2B 09 1E
MILLICENT	0C 0B 18 0B 09 1F 02 00 0D 2A
MOLLY	0C 15 23 18 29
MONICA	0C 15 23 0D 0B 19 31 23
MYRTLE	0C 3A 2B 2A 23 18
NANCY	0D 2F 00 0D 1F 29
NAOMI	0D 06 09 29 35 37 0C 3C 29
NATALIE	0D 2F 00 2A 2F 00 18 29
NICOLE	0D 0B 09 19 19 35 37 18

NAME	HEX CODE
NORA	0D 34 34 2B 31 23
NORMA	0D 34 34 2B 0C 31 23
OLIVE	3D 18 18 0B 09 0F
OLIVIA	3D 18 18 0B 09 0F 3C 29 15 23
PAMELA	25 2F 00 0C 02 00 18 31 23
PATRICIA	25 2F 00 2A 2B 0B 09 1F 2A 10 15 23
PAULA	25 3D 18 31 23
PAULINE	25 3D 18 21 29 0D
PEARL	25 3A 2B 18
PHYLLIS	1D 0B 09 18 0B 09 12
POLLY	25 15 23 18 29
PRISCILLA	25 2B 0B 09 12 1F 0B 09 18 31 23
RACHEL	2B 06 09 29 2A 10 02 00 18
RAINA	2B 06 21 29 0D 31 23
REBECCA	2B 3C 0E 02 00 19 31 23
REGINA	2B 02 00 1E 1A 3C 29 0D 15 23
RHODA	2B 35 37 1E 15 08
RITA	2B 3C 29 2A 15 23
ROBIN	2B 15 23 0E 0B 0D
ROSE	2B 35 37 12
RUBY	2B 36 37 37 0E 29
RUTH	2B 36 37 37 39
SALLY	1F 2F 23 18 29
SANDRA	1F 2F 00 0D 1E 2B 31 23
SARAH	1F 00 00 3A 15 23
SHARON	11 00 00 3A 32 0D
SHELLY	11 02 00 18 29
SHERRY	11 02 00 2B 29
SHIRLEY	11 3A 2B 18 21 29
STELLA	1F 2A 02 00 18 31 23
STEPHANIE	1F 2A 02 00 1D 2F 00 0D 29
SUSAN	1F 36 37 37 12 2F 00 0D
SUZANNE	1F 22 36 37 37 12 2F 00 0D
SYDNEY	1F 0B 09 1E 0D 21 29
SYLVIA	1F 0B 09 18 0F 21 32
TERESA	2A 21 09 2B 06 21 29 12 15 08
THELMA	39 02 00 18 0C 31 23
TINA	2A 3C 21 29 0D 15 08
TONI	2A 35 37 0D 3C 29
TRACY	2A 2B 06 21 29 1F 29
URSULA	3A 2B 1F 22 36 37 37 18 31 23
VALERIE	0F 2F 23 18 0B 2B 29
VERA	0F 21 0B 2B 31 23
VERNA	0F 3A 0D 31 23
VERONICA	0F 3A 2B 15 23 0D 0B 09 19 31 23
VICTORIA	0F 0B 09 19 2A 34 34 2B 21 32
VIOLET	0F 15 21 23 18 00 2A
VIRGINIA	0F 3A 2B 1E 1A 0B 09 0D 21 32
WANDA	2D 15 23 0D 1E 31 23
WENDY	2D 02 00 0D 1E 29
WINIFRED	2D 0B 0D 0B 1D 2B 09 1E
YVETTE	22 31 23 0F 02 00 2A
YVONNE	22 31 23 0F 15 23 0D
ZELDA	12 02 00 18 1E 31 23

PHONEME CHARTS

These charts are provided so you can make up your own name if it was not included in the Name Directory. This is done by putting together basic word sounds — called phonemes — that create the different words.

The following two charts both contain the same information (phonemes and the hexadecimal codes that make the Robot say each phoneme), but they are organized differently. The first chart is organized according to the hexadecimal code, so that you can find the phoneme if you know the hexadecimal number. The second chart is organized alphabetically by phoneme, so that you can find the hexadecimal number you want by finding the sound you wish to make.

PHONEMES
(Organized by Number)

PHONEME CODE	PHONEME SYMBOL	DURATION (MS)	EXAMPLE WORD
00	EH3	59	jacket
01	EH2	71	enlist
02	EH1	121	heavy
03	PA0	47	no sound
04	DT	47	butter
05	A2	71	made
06	A1	103	made
07	ZH	90	azure
08	AH2	71	honest
09	I3	55	inhibit
0A	I2	80	inhibit
0B	I1	121	inhibit
0C	M	103	mat
0D	N	80	sun
0E	B	71	bag
0F	V	71	van
10	CH*	71	chip
11	SH	121	shop
12	Z	71	zoo
13	AW1	146	lawful
14	NG	121	thing
15	AH1	146	father
16	OO1	103	looking
17	OO	185	book
18	L	103	land
19	K	80	trick
1A	J*	47	judge
1B	H	71	hello
1C	G	71	get
1D	F	103	fast
1E	D	55	paid
1F	S	90	pass
20	A	185	day
21	AY	65	day
22	Y1	80	yard
23	UH3	47	mission
24	AH	250	mop
25	P	103	past
26	O	185	cold
27	I	185	pin
28	U	185	move
29	Y	103	any
2A	T	71	tap
2B	R	90	red
2C	E	185	meet
2D	W	80	win
2E	AE	185	dad
2F	AE1	103	after
30	AW2	90	salty
31	UH2	71	about
32	UH1	103	uncle
33	UH	185	cup
34	O2	80	for
35	O1	121	aboard
36	IU	59	you
37	U1	90	you
38	THV	80	the
39	TH	71	thin
3A	ER	146	bird
3B	EH	185	get
3C	E1	121	be
3D	AW	250	call
3E	PA1	185	no sound
3F	STOP	47	no sound

*T must precede CH to produce Ch sound.
D must precede J to produce J sound.

PHONEMES
(Organized Alphabetically)

PHONEME SYMBOL	PHONEME CODE	DURATION (MS)	EXAMPLE WORD
A	20	185	day
A1	06	103	made
A2	05	71	made
AE	2E	185	dad
AE1	2F	103	after
AH	24	250	mop
AH1	15	146	father
AH2	08	71	honest
AW	3D	250	call
AW1	13	146	lawful
AW2	30	90	salty
AY	21	65	day
B	0E	71	bag
CH*	10	71	chop
D	1E	55	fade
DT	04	47	butter
E	2C	185	meet
E1	3C	121	be
EH	3B	185	get
EH1	02	121	heavy
EH2	01	71	enlist
EH3	00	59	jacket
ER	3A	146	bird
F	1D	103	fast
G	1C	71	get
H	1B	71	hello
I	27	185	pin
I1	0B	121	inhibit
I2	0A	80	inhibit
I3	09	55	inhibit
IU	36	59	you
J*	1A	47	judge
K	19	80	trick
L	18	103	land
M	0C	103	mat
N	0D	80	sun
NG	14	121	thing
O	26	185	cold
O1	35	121	aboard
O2	34	80	for
OO	17	185	book
OO1	16	103	looking
P	25	103	past
R	2B	90	red
S	1F	90	pass
SH	11	121	shop
T	2A	71	tap
TH	39	71	thin
THV	38	80	the
U	28	185	move
U1	37	90	you
UH	33	185	cup
UH1	32	103	uncle
UH2	31	71	about
UH3	23	47	mission
V	0F	71	van
W	2D	80	win
Y	29	103	any
Y1	22	80	yard
Z	12	71	zoo
ZH	07	90	azure
PA0	03	47	no sound
PA1	3E	185	no sound
STOP	3F	47	no sound

*T must precede CH to produce Ch sound.
D must precede J to produce J sound.

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